

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) 016417-0309083

**Box No. I TITLE OF INVENTION**

HOMOGENEOUS AND HETEROGENEOUS ASSAY METHODS USING NUCLEATION CENTERS AND NOVEL COVALENT CHEMISTRIES FOR THE RAPID MEASUREMENT OF PHOSPHORYLATION AND DE-PHOSPHORYLATION

**Box No. II APPLICANT**

This person is also inventor

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

CHROMAGEN, INC.  
10449 ROSELLE STREET  
SAN DIEGO, CALIFORNIA 92121  
UNITED STATES OF AMERICA

Telephone No.  
**(858) 450-7820**

Facsimile No.  
**(858) 558-7166**

Teleprinter No.

Applicant's registration No. with the Office

State (that is, country) of nationality:  
**US**

State (that is, country) of residence:  
**US**

This person is applicant  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

**Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

BHATT, RAM S.  
3575 SANTORO WAY  
SAN DIEGO, CALIFORNIA 92130  
UNITED STATES OF AMERICA

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:  
**US**

State (that is, country) of residence:  
**US**

This person is applicant  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on a continuation sheet.

**Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

agent

common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

BIGGS, SUZANNE L.  
PILLSBURY WINTHROP, LLP  
11682 EL CAMINO REAL, SUITE 200  
CARMEL VALLEY, CALIFORNIA  
92130-1593  
UNITED STATES OF AMERICA

Telephone No.  
**858.509.4095**

Facsimile No.  
**858.509.4010**

Teleprinter No.

Agent's registration No. with the Office  
**30,158**

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

## Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

If none of the following sub-boxes is used, this sheet should not be included in the request.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

MILLER-WING, ALLISON V.  
1913 EASTPOINTE AVENUE  
CARLSBAD, CALIFORNIA 92008  
UNITED STATES OF AMERICA

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:  
US

State (that is, country) of residence:  
US

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

HELMS, REBECCA  
8324 REGENTS ROAD, APT # 1-I  
SAN DIEGO, CALIFORNIA 92122  
UNITED STATES OF AMERICA

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:  
US

State (that is, country) of residence:  
US

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

GESSERT, STEVE  
7023 WHIPPLE AVENUE  
SAN DIEGO, CALIFORNIA 92122  
UNITED STATES OF AMERICA

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:  
US

State (that is, country) of residence:  
US

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

GONZALES, FRANK  
3269 VILLANOVA AVENUE  
SAN DIEGO, CALIFORNIA 92122  
UNITED STATES OF AMERICA

This person is:

applicant only  
 applicant and inventor  
 inventor only (If this check-box is marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:  
US

State (that is, country) of residence:  
US

This person is applicant for the purposes of:  all designated States  all designated States except the United States of America  the United States of America only  the States indicated in the Supplemental Box

Further applicants and/or (further) inventors are indicated on another continuation sheet.

## Supplemental Box

If the Supplemental Box is not used, this sheet should not be included in the request.

1. If, in any of the Boxes, except Boxes Nos. VIII(i) to (v) for which a special continuation box is provided, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No. ...." (indicate the number of the Box) and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:
  - (i) if more than two persons are to be indicated as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
  - (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
  - (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
  - (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
  - (v) if, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI.
2. If the applicant intends to make an indication of the wish that the international application be treated, in certain designated States, as an application for a patent of addition, certificate of addition, inventor's certificate of addition or utility certificate of addition: in such a case, write the name or two-letter code of each designated State concerned and the indication "patent of addition," "certificate of addition," "inventor's certificate of addition" or "utility certificate of addition," the number of the parent application or parent patent or other parent grant and the date of grant of the parent patent or other patent grant or the date of filing of the parent application (Rules 4.11(a)(iii) and 49bis.1(a) or (b)).
3. If the applicant intends to make an indication of the wish that the international application be treated, in the United States of America, as a continuation or continuation-in-part of an earlier application: in such a case, write "United States of America" or "US" and the indication "continuation" or "continuation-in-part" and the number and the filing date of the parent application (Rules 4.11(a)(iv) and 49bis.1(d)).

## CONTINUATION OF BOX NO. III

This person is:

Applicant /Inventor

CONRAD, MICHAEL J.  
 1465 VIA VALENTE  
 ESCONDIDO, CALIFORNIA 92029  
 UNITED STATES OF AMERICA

Nationality: US

Residence: US

This person is Applicant for the purpose  
 of: the United States only

**Box No. V DESIGNATIONS**

The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.

However,

- DE Germany is not designated for any kind of national protection
- KR Republic of Korea is not designated for any kind of national protection
- RU Russian Federation is not designated for any kind of national protection

(The check-boxes above may be used to exclude (irrevocably) the designations concerned in order to avoid the ceasing of the effect, under the national law, of an earlier national application from which priority is claimed. See the Notes to Box No. V as to the consequences of such national law provisions in these and certain other States.)

**Box No. VI PRIORITY CLAIM**

The priority of the following earlier application(s) is hereby claimed:

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country or Member of WTO	regional application:*	international application: receiving Office
item (1) 1 April 2003 (1-04-2003)	60/459,886	US		
item (2)				
item (3)				

Further priority claims are indicated in the Supplemental Box.

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office) identified above as:

all items       item (1)       item (2)       item (3)       other, see Supplemental Box.

\* Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)):

**Box No. VII INTERNATIONAL SEARCHING AUTHORITY**

Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / US

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)      Number      Country (or regional Office)

**Box No. VIII DECLARATIONS**

The following declarations are contained in Boxes Nos. VIII (i) to.(v) (mark the applicable check-boxes below and indicate in the right column the number of each type of declaration):

		Number of declarations
<input type="checkbox"/> Box No. VIII (i)	Declaration as to the identity of the inventor	:
<input type="checkbox"/> Box No. VIII (ii)	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	:
<input type="checkbox"/> Box No. VIII (iii)	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	:
<input checked="" type="checkbox"/> Box No. VIII (iv)	Declaration of inventorship (only for the purposes of the designation of the United States of America)	2
<input type="checkbox"/> Box No. VIII (v)	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	:

**Box No. VIII (iv) DECLARATION: INVENTORSHIP (only for the purposes of the designation of the United States of America)**

*The declaration must conform to the following standardized wording provided for in Section 214; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iv). If this Box is not used, this sheet should not be included in the request.*

**Declaration of inventorship (Rules 4.17(iv) and 51bis.1(a)(iv))  
for the purposes of the designation of the United States of America:**

I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.

This declaration is directed to the international application of which it forms a part (if filing declaration with application).

This declaration is directed to international application No. PCT/..... (if furnishing declaration pursuant to Rule 26ter).

I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.

I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications," by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

Prior Applications: .....

I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: Ram S. BHATT

Residence: San Diego, California

(city and either US state, if applicable, or country)

Mailing Address: 3575 Santoro Way, San Diego, California 92130 UNITED STATES OF AMERICA

Citizenship: UNITED STATES OF AMERICA

Inventor's Signature: .....

(if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: .....

(of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

Name: Allison V. MILLER-WING

Residence: Carlsbad, California

(city and either US state, if applicable, or country)

Mailing Address: 1913 Eastpointe Avenue, Carlsbad, California 92008 UNITED STATES OF AMERICA

Citizenship: UNITED STATES OF AMERICA

Inventor's Signature: .....

(if not contained in the request, or if declaration is corrected or added under Rule 26ter after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: .....

(of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26ter after the filing of the international application)

This declaration is continued on the following sheet, "Continuation of Box No. VIII (iv)".

**Continuation of Box No. VIII (i) to (v) DECLARATION**

If the space is insufficient in any of Boxes Nos. VIII (i) to (v) to furnish all the information, including in the case where more than two inventors are to be named in Box No. VIII (iv), in such case, write "Continuation of Box No. VIII ..." (indicate the item number of the Box) and furnish the information in the same manner as required for the purposes of the Box in which the space was insufficient. If additional space is needed in respect of two or more declarations, a separate continuation box must be used for each such declaration. If this Box is not used, this sheet should not be included in the request.

**CONTINUATION OF BOX NO. VIII (iv)**

Rebecca HELMS

San Diego, California

8324 Regents Road, Apt # 1-I, San Diego, California 92122 UNITED STATES OF AMERICA  
Citizenship: UNITED STATES OF AMERICA

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Steven GESSERT

San Diego, California

7023 Whipple Avenue, San Diego, California 92122 UNITED STATES OF AMERICA  
Citizenship: UNITED STATES OF AMERICA

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Frank GONZALES

San Diego, California

3269 Villanova Avenue, San Diego, California 92122 UNITED STATES OF AMERICA  
Citizenship: UNITED STATES OF AMERICA

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Michael J. CONRAD

Escondido, California

1465 Via Valente, Escondido, California 92029 UNITED STATES OF AMERICA  
Citizenship: UNITED STATES OF AMERICA

Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Box No. IX CHECK LIST; LANGUAGE OF FILING

This international application contains:		Number of items
(a) in paper form, the following number of sheets:		
request (including declaration sheets)	7	
description (excluding sequence listing and/or tables related thereto)	67	
claims	19	
abstract	1	
drawings	31	
<b>Sub-total number of sheets</b>	<b>125</b>	
sequence listing		
tables related thereto		
(for both, actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (c) below)		
<b>Total number of sheets</b>	<b>125</b>	
(b) <input type="checkbox"/> only in computer readable form (Section 801(a)(i))		
(i) <input type="checkbox"/> sequence listing		
(ii) <input type="checkbox"/> tables related thereto		
(c) <input type="checkbox"/> also in computer readable form (Section 801(a)(ii))		
(i) <input type="checkbox"/> sequence listing		
(ii) <input type="checkbox"/> tables related thereto		
Type and number of carriers (diskette, CD-ROM, CD-R or other) on which are contained the		
<input type="checkbox"/> sequence listing: .....		
<input type="checkbox"/> tables related thereto: .....		
(additional copies to be indicated under items 9(ii) and/or 10(ii), in right column)		
This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item):		
1. <input checked="" type="checkbox"/> fee calculation sheet		
2. <input type="checkbox"/> original separate power of attorney		
3. <input type="checkbox"/> original general power of attorney		
4. <input type="checkbox"/> copy of general power of attorney; reference number, if any: .....		
5. <input type="checkbox"/> statement explaining lack of signature		
6. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): .....		
7. <input type="checkbox"/> translation of international application into (language): .....		
8. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material		
9. <input type="checkbox"/> sequence listing in computer readable form (indicate type and number of carriers)		
(i) <input type="checkbox"/> copy submitted for the purposes of international search under Rule 13ter only (and not as part of the international application)		
(ii) <input type="checkbox"/> (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter		
(iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the sequence listing mentioned in left column		
10. <input type="checkbox"/> tables in computer readable form related to sequence listing (indicate type and number of carriers)		
(i) <input type="checkbox"/> copy submitted for the purposes of international search under Section 802(b-quater) only (and not as part of the international application)		
(ii) <input type="checkbox"/> (only where check-box (b)(ii) or (c)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quater)		
(iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the tables mentioned in left column		
11. <input type="checkbox"/> other (specify): .RETURN POSTCARD.....		

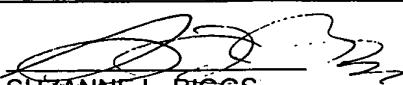
Figure of the drawings which should accompany the abstract: FIG. 3A

Language of filing of the international application:

ENGLISH

## Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

  
SUZANNE L. BIGGS

Reg. No. 30,158

## For receiving Office use only

1. Date of actual receipt of the purported international application:	2. Drawings:	
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:	<input type="checkbox"/> received:	<input type="checkbox"/> not received:
4. Date of timely receipt of the required corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent): ISA /	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid	

## For International Bureau use only

Date of receipt of the record copy by the International Bureau:

See Notes to the request form

This sheet is not part of and does not count as a sheet of the international application.

# PCT

## FEE CALCULATION SHEET Annex to the Request

For receiving Office use only

International Application No.

Date stamp of the receiving Office

Applicant's or agent's  
file reference

016417-0309083

Applicant

CHROMAGEN, INC.

### CALCULATION OF PRESCRIBED FEES

1. TRANSMITTAL FEE . . . . . 300.00 T

2. SEARCH FEE . . . . . 1,000.00 S

International search to be carried out by US

*(If two or more International Searching Authorities are competent to carry out the international search, indicate the name of the Authority which is chosen to carry out the international search.)*

### 3. INTERNATIONAL FILING FEE

Where items (b) and/or (c) of Box No. IX apply, enter Sub-total number of sheets } 125

Where items (b) and (c) of Box No. IX do not apply, enter Total number of sheets } 125

i1 first 30 sheets . . . . . 1,134.00  i1

i2 95 x 12.00 = 1,140.00  i2  
number of sheets in excess of 30

i3 additional component (only if sequence listing and/or tables related thereto are filed in computer readable form under Section 801(a)(i), or both in that form and on paper, under Section 801(a)(ii)):

400 x \_\_\_\_\_ = i3  
fee per sheet

Add amounts entered at i1, i2 and i3 and enter total at 1 . . . . . 2,274.00 1

*(Applicants from certain States are entitled to a reduction of 75% of the international filing fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at 1 is 25% of the international filing fee.)*

4. FEE FOR PRIORITY DOCUMENT (if applicable) . . . . . 20.00 P

5. TOTAL FEES PAYABLE . . . . . 3,594.00

**TOTAL**

### MODE OF PAYMENT

authorization to charge  
deposit account (see below)

postal money order

cash

coupons

cheque

bank draft

revenue stamps

other (specify):

### AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNT

*(This mode of payment may not be available at all receiving Offices)*

Authorization to charge the total fees indicated above.

*(This check-box may be marked only if the conditions for deposit accounts of the receiving Office so permit) Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.*

Authorization to charge the fee for priority document.

Receiving Office: RO/ US

Deposit Account No.: 50-2212

Date: 1 APRIL 2004

Name: Suzanne L Briggs

Signature: 